JPRS 78831 26 August 1981

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 177

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Covernment Printing Office, Washington, D.C. 20402.

Indexes to this report (by keyword, author, personal names, title and series) are available from Bell & Howell, Cld Mansfield Road, Wooster, Ohio 44691.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 177

CONTENTS

WORLDWIDE AFFAIRS

Brie	fs Kuwait-Bulgaria Telephone Link	1
	ASIA	
BANGLADESH		
Dacc	a Plans for Satellite Ground Station Told (THE BANGLADESH OBSERVER, 21 Jun 81)	2
INDIA		
Brie	Foreign-Made Telephone Equipment Studied Telephone Industry Expansion Madras-Kharagpur Wideband Microwave 10-Year Plan for Space Proposed Dubayy Satellite Link	4 4 5 5 5
INDONESIA		
Brie	fs ASEAN Telecommunications Meeting Opens	6
PEOPLE'S RE	PUBLIC OF CHINA	
Lase	r Fiberguide Communications Developed (Xinhua Domestic Service, 18 Aug 81)	7
Gezh	ou Dam Monitoring Instruments Said Effective (Zhao Chengyi, Geng Shouren; CHANG LANG RIBAO, 12 Jun 81	.) . 8
Optio	cal Cable Communications System Set Up (Zhang Dungong; BEIJING RIBAO, 20 Jun 81)	9
	-a- [III - WW - 1	40]

VIETNAM	1		
	Village	Wired Radio Station (HANOI MOI, 13 Jun 81)	10
		LATIN AMERICA	
BRAZIL		-	
	Briefs	Suspension of 'BBC' Broadcast	11
COSTA I	RICA		
	Briefs	Increased Telephone Service	12
VENEZUI	ELA		
	Use of	Intelsat V To Begin in Mid-1982 (Eduardo Delpretti; EL NACIONAL, 31 Jul 81)	13
		NEAR EAST AND NORTH AFRICA	
IRAN			
	Post-Re	evolution Telecommunications Progress Reviewed (KEYHAN, 20 Jul 81)	16
JORDAN			
	Briefs	PERTRA-JNA Expansion Project	20
KUWAIT			
	Briefs	News Agency Announces New Satellite Link	21
LEBANO	N		
	'Voice	of Hope' TV Station To Begin Trial Broadcasts (Domestic Television Service, 12 Aug 81)	22
		SUB-SAHARAN AFRICA	
GHANA			
	Briefs	Broadcasting Job Action Ends	23

GUINEA-BISSAU	
Briefs Old Broadcast Returning	24
NIGER	
Briefs Niamey-Lagos Telephone Communications	25
USSR	
International Communications Exhibition To Be Held in Moscow (T. A. Emenova; VESTNIK SVYAZI, Jun 81)	26
Problems With Railroad Loudspeaking Systems Discussed (I. Lopatin; GUDOK, 23 Jun 81)	28

KUWAIT-BULGARIA TELEPHONE LINK--Communications Ministry Under Secretary 'Abd al-Rahman al-Ghunaym has announced that a direct telephone link has been installed between Kuwait and Bulgaria. He said the line will be operated manually temporarily until the automatic international exchange in Bulgaria comes into operation at the end of 1981. He said officials of the two countries felt, particularly following the visit of the communications minister and the Communications Ministry under secretary to Bulgaria, that there are many reasons for a direct telephone link between Kuwait and Bulgaria in view of the increasing number of Kuwaitis who go to Bulgaria on vacation or for medical treatment and the constant growth of bilateral trade. [GF181840 Kuwait AL-WATAN in Arabic 18 Aug 81 p 2]

DACCA PLANS FOR SATELLITE GROUND STATION TOLD

Dacca THE BANGLADESH OBSERVER in English 21 Jun 81 pp 1, 8

[Text] The South-East Asian Regional Satellite Ground Station for resource survey will be set up in Bangladesh reports BSS.

Work for the Taka 30 crore station the first of its kind in the region will begin next month Dr R. A. Ghani State Minister for Science and Technology said this on Saturday.

The project will be implemented in three years with the assistance of French Government.

He said that an agreement in this regard will be signed in Dacca next week between Bangladesh and the government sponsored French manufacturing company "Society for European Propulsion (SEP)".

ENA adds: Dr Ghani said that the French Government has agreed to provide an assistance of Taka 28 crore for the project.

He said that the site of the station has not yet been selected but it will be somewhere near the capital city he added.

About the area to be covered by the station Dr Ghani said it will have the capacity to scan objects within four thousand miles diametre and two thousand miles radius covering almost one-third of the globe. "The station will be able to tract the French satellite Spot" he pointed out.

Explaining the objectives of setting up the ground station the State Minister said that it will carry out survey on agriculture cropping forestry fisheries water resources and process other physical data. The station will process images sent back by the satellite "Spot" he added.

Dr Ghani said that during his stay in Paris he held talks with French Minister of State for Research and Technology Mr Jean Pierre Chevenement. He said that he held discussions with the French Minister on the issue of cooperation between the two countries in the fields of science and technology space research remote sensing and oceanography.

Dr. Chani also visited French Research Centre at Tuluse 700 hundred kilometres off Paris space craft manufacturing factory at Varnan 100 kilometres off Paris and

Oceanography Research Institute at Prest another French town. He also visited the International Exhibition on aeronautics and Space held in Paris.

On his way back Dr Ghani visited Jeddah and held talks with Deputy Foreign Minister of Saudi Arabia Sheikh Abdur Rahman Al-Mansur. He said that at Jeddah he attended the Islamic Cultural and Religious Affairs Ministers conference held at Mecca. He also performed Omrah.

FOREIGN-MADE TELEPHONE EQUIPMENT STUDIED -- Proposals for manufacture of telephone instruments with foreign collaboration are now under consideration of the Government, reports PTI. There are two offers before the Government, one from Italy and another from West Germany for fully automatic production facilities for making one million instruments per annum. The need for foreign collaboration arises from the fact that indigenous capacity is not enough to meet the country's requirement. The existing technology available within the country does not ensure uniform quality. A new improved telephone instrument developed by the Indian Telephone Industries and the Telecommunication Research Centre (TRC) is not being taken up for production because of lack of infrastructural facilities particularly for improving the transmitter, receiver and the dial, according to the director Swaminathan. Also under discussion is the choice between the older analog system and digital system for the five lakh line capacity electronic exchange factory proposed to be set up in the country. The TRC has been engaged in developing telecommunication equipment and 15 items developed by it have been cleared for production in 1981. These include a radio system for providing seven telephone and five telegraph channels in remote villages and a rural electronic exchange with nine telephone connections. [Text] [New Delhi PATRIOT in English 13 Jul 81 p 8]

TELEPHONE INDUSTRY EXPANSION—New Delhi, 14 Jul (PTI): The Indian Telephone Industries (ITI) has approved plans for the expansion of its Srinagar unit for the assembly of 100,000 telephone instruments per annum. Under the proposal, the unit will at present assemble 677 telephone instruments, and in a phased programme, reach telephones in 1983-84. While the Srinagar factory will continue to receive important parts like transmitters, receivers and dials from the Bangalore and Naini factories, the unit itself will manufacture and procure other items through ancillary units. The capital cost of this expansion project is about Rs. 50 lakhs. The additional manpower estimated for this expansion is 99. The ITI also has a proposal to set up manufacturing facility for coiled telephone cords at Srinagar. A provision of Rs. 75 lakhs has been proposed in 1980-85 plan for the project. The additional manpower would be about 50 to 75. Starting with a production value of Rs. 3.75 lakhs in 1970-71, the value of the various products manufactured by the Srinagar unit reached Rs. 58 lakhs during 1979-80. [Text] [Bombay THE TIMES OF INDIA in English 15 Jul 81 p 7]

MADRAS-KHARAGPUR WIDEBAND MICROWAVE--Madras, 15 Jul--Work on the Rs. 17-crore East Coast wideband microwave project connecting Madras with Kharagpur was today inaugurated by Mr A. V. S. Mani, General Manager, Telecom Projects, Madras. The project has capacity of 1800 telephone channels and will provide stable circuits linking Madras, Nellore, Vijayawada, Visakhapatnam, Cuttack and Kharagpur. The network can also be used for TV relay between Madras and Calcutta like the existing facility between Madras and Bombay. The Madras-Vijayawada section of the project is expected to be commissioned by March 1982, in the first phase and the rest of the route will be progressively commissioned by December 1982. [Text] [Madras THE HINDU in English 16 Jul 81 p 12]

10-YEAR PLAN FOR SPACE PROPOSED--New Delhi, 19 Aug (AFP)--India proposes to develop space-borne tracking stations and new launch ranges for bigger and powerful [as received] rockets under the next 10-year space programme estimated to cost 85,400 million rupees (about 9,489 million U.S. dollars). A report on the programme profiles for 1980-90 presented before Parliament today siad India would become "self-reliant in launching operational satellites for remote sensing" before the end of the decade. The programme envisages the development of operational augmented satellite launch vehicles (ASLV) and polar satellite launch vehicles (PSLV) capable of launching 600-kg remote sensing satellites in sun synchronous orbit from Indian ranges. India's first remote-sensing satellite is to be launched from abroad in 1984 and a communications satellite (PROTO-INSAT) in 1986. Two multi-purpose satellites, INSAT-1A and INSAT-1B, will be launched from the U.S. in 1982 and 1983 and INSAT-1C in 1989 also from the U.S. The programme profile also envisages developing launch capability for geosynchronous missions. [Text] [BK191607 Hong Kong AFP in English 1537 GMT 19 Aug 81]

DUBAYY SATELLITE LINK--The UNITED NEWS OF INDIA [UNI] on 20 July commissioned the Dubayy-Delhi satellite link. With this it has become the first Indian news agency to employ modern means to provide coverage of events in the Gulf and neighboring states. The agency has already set up a Delhi-Dubayy satellite channel to serve newspapers in the United Arab Emirates. [Text] [BK211445 Delhi Domestic Service in English 1530 GMT 20 Jul 81]

INDONESIA

BRIEFS

ASEAN TELECOMMUNICATIONS MEETING OPENS--The second session of the inter-ASEAN international satellite communications conference opened in Medan, North Sumatra, this morning and will meet until 22 August. The director general of post and telecommunications, Suryadi, head of the Indonesian delegation, was elected chairman of the session. The meeting will, among other things, discuss the possibility of utilizing the Indonesian Palapa satellite for exchanging news between the five ASEAN member countries. The meeting will also discuss a report on using an ASEAN satellite for telecommunications. Meanwhile, the public relations officer of the Central Post and Telecommunications Office, told the RRI [Radio Republik Indonesia] station in Medan this morning that Indonesia, Malaysia and Singapore are making preparations for the laying of submarine cables, which will link the cities of Medan, Penang and Singapore. For this purpose, a survey will be conducted soon by the Directorate General of Post and Telecommunications, with the cooperation of a Japanese telecommunications firm. During the first stage, the submarine cable communications system will use 480 channels. [Text] [BK191435 Jakarta Domestic Service in Indonesian 1200 GMT 19 Aug 81]

LASER FIBERGUIDE COMMUNICATIONS DEVELOPED

OW1:1125 Beijing Kinhua Domestic Service in Chinese 0108 CMT 18 Aug 81

[Text] Beijing, 18 Aug (XINHUA)—An experimental communications system consisting of a 3.3 kilometer-long laser fiberguide [ji guang guang dao qian wei 3423 0342 0342 1418 4928 4850] cable has been incorporated into Beijing Municipality's No 86 and 89 telephone bureaus since last February. Operations over the past 5 months show that the system's performance is good and free of disruptions or other mishaps. The system represents an important step by China toward modernizing its communications.

This new laser fiberguide experimental communications system is the result of the work of over 20 scientific research units, institutes of higher learning and related industrial plants in Beijing with the support of units concerned in other municipalities and provinces. In developing the system, Beijing's scientific and technological workers and other related personnel cooperated closely with one another and paid special attention to the system's overall stability and dependability.

Laser fiberguide communications makes use of light waves traversing fiberguide cables to transmit communications signals. This new method of communications has vastly greater capacity than the cable, microwave or carrier wave communications currently in use. Furthermore, fiberguide communications shows great resistance to electromagnetic interference and makes detection or wiretapping difficult. Some experts believe that fiberguide communications can be widely used not only by postal and telecommunications departments but also in the military, economic, scientific and cultural fields and to serve the people's livelihood.

PEOPLE'S REPUBLIC OF CHINA

GEZHOU DAM MONITORING INSTRUMENTS SAID E JECTIVE

Wuhan CHANGJIANG RIBAO in Chinese 12 Jun 81 p 1

[Article by Zhao Chengyi [6392 2052 5030] and Geng Shouren [5105 1343 0088]:
"Gezhou Dam Engineering Project's rearly Four Thousand Monitoring Instruments
Serve Their Function; The Dongfanghong No 51 Vessel Participating in Experimental
Navigation Is Equipped With a New Type of Wireless Telephone"]

[Text] Special report from the Gezhou Dam Site by CHANGJIANG RIBAO, June 11: This afternoon, this reporter learned from the Gezhou Dam construction site design representatives office of the Changjiang river valley planning office: The Gezhou Dam water conservancy project has nearly 4,000 "sentries" that can hardly be detected. They are intently holding their positions and serving effectively.

These so-called "ears and eyes" and "sentries" of the dam refer to the various types of monitoring instruments on top and below the dam. They observe changes in the dam using methods of optical measurements, measurements of the power source and the tubes and pipes to understand the safety and the utilization of the dam structures. They accurately provide various types of data for the scientific research and design personnel to carry out analysis and studies in time to examine the results of the design of the dam so that the scientific and technical level of building large dams in our nation can be continuously improved.

Related report: Today the communications group of the command headquarters of test navigation of Gezhou Dam equipped the Dongfanghong No 51 vessel with a very high frequency (VHF) wireless telephone which is of an advanced level in our nation at present to directly serve test navigation.

The VHF wireless telephone is a new type of wireless telephone that is strongly resistant to interference and which has a large emitting power. It can convert wired telephone into wireless telephone and convert wireless telephone into wired telephone communications. The Dongfanghong No 51 is the first vessel navigating along the entire Changjiang to be equipped with such a telephone at present.

According to the demands of test navigation, the Dongfanghong No 51 vessel is required to communicate with eight dispatching points above and below the dam during test navigation. After installation of the VHF wireless telephone today, test communication results were good.

9296

CSO: 4008/417

OPTICAL CABLE COMMUNICATIONS SYSTEM SET UP

Beijing BEIJING RIBAO in Chinese 20 Jun 81 p 1

[Article by Zhang Dungong [1728 2415 1872]: "Our Nation's First Optical Cable Communications System Is Set Up in Beijing; It Has a Large Capacity, Is Reliable, Is Strongly Resistant to Interference; Eavesdropping Is Difficult; It conserves Copper Materials"]

[Text] Our nation's first 3.3-kilometer, 120-channel optical cable communications system has begun trial operation in our city at the beginning of June. This is one of the major scientific research achievements of our city, and it signifies that our city's telephone communications has begun to enter into a new stage. This optical cable communications system was completed in Beijing in September, 1979. It is installed between the telephone branch offices No 86 and No 89. After over one year of parallel network experiments and improvement, it has now completed its predetermined plans. The scientific committee of Beijing City held an evaluation meeting during the first 10 days of June. The meeting held that the various transmission characteristics of the 3.3-kilometer optical cable communications system in Beijing are basically stable, the practicality has reached the advanced levels in our nation at present, it already possesses conditions for trial operation in the field, and it can be handed over for trial operation and shoulder the tasks of daily telephone communications.

The optical cable communications system consists mainly of three parts, the electrical terminal, the optical terminal and the optical cable. The optical cable is made of silicon dioxide light guiding fibers. In the optical cable, light waves replace electrical waves in the electrical cable to realize transmission of information. Optical cable communications has a large communications capacity, its reliability is good, its resistance to interference is strong, eavesdropping cannot be easily done and it conserves copper materials. It is a means of communication that has a future for development. During the 1970's, this new technology was studied and developed internationally and competitively. At present, only a few nations have realized commercial applications, and most of the nations are still in the trial use stage.

The research work for optical cable communications in Beijing began in 1976. Under the support of the State Scientific and Technological Commission and the Ministry of Posts and Telecommunications, the Beijing City Scientific Committee organized Beijing's schools of higher education, the scientific research academies and institutes, factories and the Beijing City Telecommunications Bureau totaling over 20 units and spent 5 years to develop the system successfully. This research achievement has contributed towards developing the capitol's communications business.

9296

CSO: 4008/413

VILLAGE WIRED RADIO STATION

Hanoi HANOI MOI in Vietnamese 13 Jun 81 p 1

[Text] Recently, with the active assistance of the Hanoi Broadcasting Station, Vong Xuyen Village completed and placed into operation a village wired radio station. The station system consists of 20 loudspeakers with 10 to 25 watt output utilizing 7.5 kilometers of wire and two amplifiers valued at over 50,000 dongs. Of this sum the State supplied 24,000 dongs and the village provided 26,000 dongs. This is the first village wired radio station in Phuc Tho District constructed jointly by the State and the local people.

SUSPENSION OF 'BBC' BROADCAST--[From the Congressional report]--Senator Marcos Freire has asked the government to negotiate with British officials the reestablishment of radio programs broadcast in Portuguese by the BBC in London. Protesting for the suspension of these programs, Freire stated that this fact has Jeprived thousands of Brazilians of a valuable .pur : of information and culture. [Text] [PY140023 Brasilia Domestic Service in Portuguese 2200 GMT 13 Aug 81]

CSO: 55CO/2287

INCREASED TELEPHONE SERVICE -- A digital switching central with a capacity of 8 million circuits was put in service by the Costa Rican Electricity Institute (ICE) to meet the growing demand for telephone service in the metropolitan area. The equipment was inaugurated by the president of the republic, Rodrigo Caraze Odie, who commented on the need to exploit the nation's energy resources and to the communication system. The tandem central was acquired for three and a half million dollars from a Swedish firm and will serve to handle telephone cails from San Jose, Heredia and part of Cartago, from its location in the ICE building on Second Avenue. The instituto acquired also modulation by codified impulse equipment, that is, equipment to complete the central for an amount of \$4,418,507, resulting in a million dollar investment on both sides. According to what was mentioned, among the benefits which the telephone central will provide, is the avoidance of future saturation of the system resulting in annoyances suffered by the callers. Likewise, it was explained that the central will be able to handle more calls more rapidly, because it is digital, which differentiates it from those which ICE presently used and which are electromechanical and analogical. [Text] [San Jose LA REPUBLICA in Spanish 16 Jul 81 p 2] 9678

USE OF INTELSAT V TO BEGIN IN MID-1982

Caracas EL NACIONAL in Spanish 31 Jul 81 p C-3

[Article by Eduardo Delpretti: "Venezuela in the Orbit of Intelsat Satellite V"]

[Text] The project will be underway by the middle of next year at a total cost of approximately 84,256,000 bolivares. Its useful possibilities are infinite but in the beginning we will use it for transport and air travel, rural telephone operations, government television throughout the country, national defense, and petroleum data transmission.

Venezuela will go into orbit by the middle of next year with the Intelsat V satellite at a total cost of approximately 84,256,000 bolivares. Outer space will open its clouds for the peaceful use of the satellite system in support of the Venezuelan domestic system. The history of this project goes back only to last year when, on 25 July, the communications sector general manager submitted to the Ministry of Transport and Communications a memorandum dealing with the formation of a commission to study Venezuelan domestic communications by satellite The minister approved it.

Thus the commission began its work, meeting periodically with each of the possible user agencies for the system, such as Venezuelan Television, Nati al Telephone Corporation of Venezuela, Petroleum of Venezuela, and its affilices, the Ministry of Defense, and the Directorate General of the Transportation and Air Travel Sector. They tried to collect the data necessary for the dimensioning of the project.

On 16 September 1980, the directorate general of the communications sector, through CANTV [National Telephone Company of Venezuela], asked the International Satellite Telecommunications Organization (INTELSAT) to reserve, in the space segment of the organization, two and a half transponders for use by the national government. This reserved capacity was basically approved by the 44th Meeting of the Board of Governors of INTELSAT last December.

This was followed by meetings of the commission and, through the Technical Cooperation Agreement between Venezuela and France, a request was sent out for and approval was received for advice from the Satel Board in order then to proceed to the drafting of the project and the establishment of the goals.

Background of Intelsat V

Venezuela joined the organization upon signing the provisional accord of Intelsat on 22 December 1965. The final accord was ratified by Venezuela on 14 December 1972.

What is Intelsat? It is an organization whose main objective is to supply, on a commercial basis, the space segment necessary for providing all parts of the world, without discrimination, with international and national public telecommunications services.

The satellite channel has been exploited in the country since 1970 through international communications with the Intelsat III. Since thea, Venezuela's participation in the area has been a regular operational activity for the earth stations at Camatagua and CANTV which is currently working through the Intersat IV satellite.

In the middle of 1977, Venezuela, through CANTA, participated in the preparation of a domestic satellite called Project Condor to provide communication for the Andean region, Venezuela, Colombia, Ecuador, Peru, and Bolivia. Although this project has not yet been implemented, a joint announcement is expected together with the countries involved at an as yet undetermined date.

Starting in 1978, the Ministry of Transportation and Communications and CANTV began to receive offers for technical advice and turnkey projects to implement a satellite system in the country.

However, since there was no policy on that matter, it was impossible to come up with a significant response on that score. We know of a similar situation that arose in other government agencies, such as Petroleum of Venezuela, VTV, among others. There is no information as to the way these offers were processed.

But it must be emphasized that both the Ministry of Transportation and Commun. cations and CANTV were very much concerned with promoting the use of satellites in the country and the project was postponed in expectation of a better opportunity.

Benefits from Domestic Satellite

The opportunity came with the appointment of the Commission for the Study of Venezuelan Domestic Communications by Satellite.

During the first talks among its members, the idea was expressed that domestic satellite communications were something that simply had to come in Venezuela. The benefits were immediately obvious.

Satellite communications are becoming cheaper each day through a reduction in the cost of launching and orbiting the satellite. The current technology has made it possible to build earth stations of smaller size and lesser cost. This is why this is something feasible and why it could be a supplementary alternative to the expansion and safety of the CANTV microwave net which the country already has; we expect that it will grow rapidly because of the high annual growth rate in the demand for telecommunications services rendered and even more so that will be rendered on short notice. Furthermore, the satellite channel will permit

lower costs when compared to conventional channels under the national VTV coverage plan, along with communications for the Ministry of Defense, with greater reliability and a greater degree of penetration.

But the possibilities of satellite use are infinite.

Earth Benefits from Sky

Some of the members of that Commission met in the office of Communications Sector General Manager Luis Leanez Lugo in the persons of Capt Julio Cesar Sanchez, of the Electronic Communications Service of the Armed Forces, Ramon Maldonado, Director of Communications Planning; Santiago Saavedra, General Manager of Venezuelan Television, and Silvia de Paez, Coordinator of International Affairs for the Commission.

"It is our understanding that Venezuela will lease two transponders out of the ir INTELSAT V. Now, what is a transponder?"

"It is a device made up of a receiver element and a transmitter element in the satellite. We are carrying out this first phase now, that is to say, the project will be developed in the form of the ground sement consisting of the remote antennas which receive and transmit, located at utilization points. We will use transponders of the hemispheric type, with the advantage of greater broadcasting power on a smaller surface, which is why the antennas are smaller in dimension and they are moreover economically more attractive for mass use. For each transponder we will pay \$800,000 per year on the basis of a 5-year contract with INTELSAT.

On the national level, we will install 23 fixed remote antennas of 7.5 meters (the antenna at Camatagua measures 32 meters, to cover all borders plus ten major cities; we are going to have ten mobile antennas of 4.5 meters to cover the needs of PDVSA [Venezuelan Petroleum, Inc.] for its petroleum prospecting activities in the offshore zone, in the western and eastern and southern parts, and for the exclusive use of Ministry of Defense, plus a central antenna of 11 meters.

With them we hope to win an audience for VTV to the extent of 95 percent of the population, according to the promises of President Herrera, during the election campaign, with direct signals; we will also work toward the regionalization of television program production with studios in various administrative zones throughout the country. Looking at telephone operations, we will open 600 single-directional channels to cover almost 80 percent of rural needs. And we will meet all needs of Venezuelan Petroleum, the Directorate General of Transportation and Air Travel, the Ministry of Defense, and CANTV.

But the benefit of this domestic satellite can be extended to other organizations with whose authorities the Commission members will talk.

There are many examples for intergovernmental communications involving the Ministry of Foreign Relations and connected organizations such as DIEX [Export Directorate] and DISIP [Directorate of Intelligence and Prevention Services], the Ministry of Environment, which will get information on natural resources and their conservation, the Ministry of Health which could use the same equipment for various rural hospitals, to make highway patrols more effective; for communications between ports, for state police units and for PTJ [Judicial Technical Police]; as well as to get data on background information, fingerprints, and any other information in a rapid manner.

5058

POST-REVOLUTION TELECOMMUNICATIONS PROGRESS REVIEWED

Tehran KEYHAN in Persian 20 Jul 81 p 11

Text7 A review of the work of the Telecommunication Company in memory of the martyr Dr Mahmud Qandi. What stage has Iran's telecommunications reached 2 years after the Revolution?

The 7 Tir Karbela occurrence was a high point in the history of the Islamic revolutionary struggle and an indicator of the defeat of the practical methods of diversionary lines against true Islam. It so well proved its own deceitfulness because they must answer whether in their own mind they carried out a blood bath against those they considered "affiliated" with the East and the West or against those "affiliated" with beliefs for economic, cultural, and other independence who have followed independent policies despite ever-increasing stages of complications and difficulties. It is from among those who had responsible positions in agencies and ministries, that one can remember Dr Mahmud Qandi, the martyred minister of post, telegraph, and telephone who in reality was martyred while carrying out the independent policy of this ministry. In his efforts to achieve telecommunication self-sufficiency, he came up against obstructionism from the U.S., German, and French imperialist companies.

We now refer to a small part of the oil politics cornected with imperialist domination and the activities of the Telecommunication Company within the framework of telegraph, telephone, and telex operations which comprised the major field of the ministerial work of martyr Mahmud Qandi. We specially draw attention to the activities of the past 10 months from Mordad 1359 to 1 Tir 1360 /23 Jul 1980-22 Jun 19817 which appeared in the most recent statistics, a few days before his martyrdom, which reflect urban telecommunications, establishing rural communications facilities, international links, the provision of automatic dial systems, the number of telephones provided, etc.

Telecommunication Self-Sufficiency Vis-a-Vis Treachery by Imperialist Firms

Imperialist policies, as well as colonialist policies and domination oriented interferences over our telecommunications system during the previous regime is clear and we are now grappling with its problems. But because of the confidence of the government and martyred Dr Mahmud Qandi that an independent policy must be followed, the preparation of the inner-city telephone system expansion project, previously carried out by Japanese, French, and American engineers, is now being done by Iranian personnel. Moreover, before the Revolution, a 312 million deutchmark contract had been concluded with a German firm for the purchase and installation of new automatic-dial telephone equipment for inner-city systems. Following the Revolution, Iranian

personnel undertook the installation work, thereby saving 64 million marks. This entailed work in urban centers which will be enumerated later in this report. At the same time, another of the domination-seeking imperialist programs over the policies of this company to which martyred minister Mahmud Qandi had referred was the treachery of the U.S. corporation GTE /General Telephone and Electronics/ which stopped work on 190,000 nearly completed telephone numbers across the country and refrained from providing spare parts for the telecommunication facilities, contrary to agreements and international law, thereby imposing a spare parts economic blockade against us. In addition, the obstructionism of other similar companies, such as the German firm Siemens, in evading the delivery of telecommunication facilities were also a part of the pressure tactics used against the independent policy pursued by us, even though the corporations are duty-bound to supply spares as long as the equipment which they have sold are in operating condition.

The reorganization of the Telecommunication Company on the basis of provincial self-sufficiency and the re-orientation of the personnel work force on the basis of actual need has been implemented so far in the Provinces of Mazandaran, Gilan, East and West Azerbaijan, Khorasan, Kerman, Fars, Kermanshahan, Esfahan, and Khuzestan.

Installation and Operation of Facilities by Iranians

The installation of the inter-city automatic telephone systems by iranian workers are among successful actions which are playing a major part in the self-sufficiency of the telecommunications system. In the 10-month period of Mordad 1359 to the beginning of 1360 \(\frac{7}{2} \) Jul 80-21 Mar 817 these telephones were installed in Andimeshk in the beginning of 1360 while installations, operations, and changes in the systems were carried out in Quchan, Kord Kuy, Dameghan, Kazerun, Zarand, Baft, Babak, Bam in Kerman Province, and Rudbar in Rasht Province. New installations were set up in Dezful, Andimeshk, Tehran, Ahvaz, and Kord Kuy with 6 outgoing and 4 incoming lines via Gorgan to link with the General network. In addition, 4020 automatic telephone lines have been installed in 47 cities in the Central Province, Tehran suburbs, Gilan, Mazanderan, East and West Azerbaijan, Fars, and Kerman. Of these, 2824 numbers are now in operation.

In recent months work proceeded on the installation, operation, and expansion of telephone switchboards of inter-city and magnetic centers of many provincial cities, including the start of the operation of the magnetic center in Baneh in Kordestan Province, and the installation and the start of the operation of one Iranian switchboard in Dezful for use in inter-city links, as well as at the air bases in Bandar' Abbas.

Also in this period, a number of long-distance F-36 and other equipment which had lain as rejects in storage were installed through the good efforts of technicians who also expanded long-distance magnetic switchboards after rebuilding equipment. In the industrial sector, 53,500 of urban automatic telephone numbers were received from the Telephone Instrument Manufacturing Plant in Shiraz. Delivery of these had started in 1358 /21 Mar 79-20 Mar 807.

Telex and "Gentex" Operations

In the telex and gentex sic7 operations, the Telecommunication Company provided new customers with Latin and Persian units (number 186), and 14 new automatic telegraph lines were set up between provincial and city region (shahrestan) centers. Also, a number of transmitting, telegraph, and Persian keyboards were sent to the telecommunications centers in Ilam and Pars Provinces and Dezful. In the 10-month period of Mordad 1359 to Khordad 1360 the centers of Shahinshahr, Najafabad, Yazd, Zabol, Zahedan, Mashhad, Jahrom, Sabzevar, Neyshabur, Bushehr, Torbat-e Heydariyeh, Khoy, Maragheh, Tabriz, and Kermanshahan were joined to the international network as part of the international linkage program.

Rural Communication

In implementing the government's program that stresses the need for rural communications and bearing in mind that between 1343 and the end of 1359 [21 Mar 1964-20 Mar 19817 a total of 329 rural centers had telephone links, during the year that ended on 20 Mar 1981 a total of 100 rural areas were provided with telephone services, while in the year which began on 21 Mar 1981 services for 555 rural centers have been drawn up and approved. By the end of June, 30 of these centers had telephone links while 230 preliminary projects, 1:0 detailed projects, and 30 other projects had been carried out. Action has also been taken for the purchase of 51 items needed for this project. The Telecommunication Company's statistics of annual installation of rural telephone services show that by the end of Khordad 1360 [21 Jun 817 492 rural centers had telecommunication links. Of these, 4 centers had had the service prior to 1343 /19647. According to the same statistics, telephone links were set up in 13 rural centers in 1350 /21 Mar 71-20 Mar 727 and in 10 rural centers in 1358 /21 1979-20 19807 but the same statistics show that after the Revolution in 1358 the number of rural centers with telephone links were some five times more than the annual average of prerevolutionary years.

According to the figures, in the past 10 months from 1 Shahrivar 1359 to 31 Khordad 1360 [23 Aug 80-21 Jun 81] telephone links covered 8 points in the Tehran suburbs, 4 in the Central Province, 3 in Gilan Province, 7 in Mazandaran, 4 in West Azerbaijan, 13 in Fars Province, 8 in Kerman, 14 in Khorasan, 6 in Chahar Mahall va Bakhtiari Province, 2 in Ilam, 1 in Kohkiluyeh va Boyer Ahmad Province, 5 in Zanjan, 14 in Semnan, 5 in Sistan va Baluchestan Province, 8 in Yazd.

Urban Telecommunication Activity

Work carried out in the past 10 months at urban automatic telephone centers in various provinces are as follows: East Azerbaijan with a capacity of 121,000, West Azerbaijan 30,000, Esfahan 11,000, Tehran suburbs 16,000, Chahar Mahall va Bakhtiari, 14,000, and Khorasan with a 28,000 number capacity. Of these, the following have been either installed or installations are under way: East Azerbaijan 32,500, West Azerbaijan 13,000, Esfahan 5000, Tehran suburbs 8,000, Chahar Mahall va Bakhtiari 6,500, and Khorasan 7,000. Also, according to available figures the following places have these telephone unit capacities: Khuzestan 44,000, Zanjan 6,000, Se nan 26,000, Sistan va Baluchestan 27,000, Pars 75,000, Kordestan 15,000, Kerman 29,000, Kangavar 5,000, Gilan 48,000. Of these, the following units have been installed or will be: Khuzestan 6,300, Zanjan 2,500, Semnan 8,500, Sistan va Baluchestan 7,500, Fars 22,000,

Kordestan 5,500, Kerman 8,000, Kangavar 2,500, Gilan 12,400. Also, according to these statistics, the capacity of Lorestan Province has been increased from 12,000 to 20,000 units and that of Mazandaran from 13,000 to 19,000 while 83,000 units can be installed in the Central Province, 20,000 in Hormozegan Province, 6,000 in Hamadan and 30,000 in Yazd. Of these, the following units have been installed or installation is under way: 6,500 in Lorestan, 28,000 in Hazandaran, 12,500 in Central Province, 3,500 in Hormozegan, 2,500 in Hamadan, and 12,650 in Yazd.

Telephones Installed in Tehran

According to available statistics, a total of 424,600 telephones were connected up to the year 1359 / I980-817. Of these, 412,032 were in operation. But the figures concerning the activities and changes in Tehran telephone exchanges within the past 10 months show that 30,000 new units were installed with 1,200 operating. Also, up to Farvardin 1359 / Imar 807 Tehran had 276,430 telephone subscribers while in the last 10 months 24,987 subscribers have been added to that figure. Also, 7,211 telephone lines have been set up and 125 new public telephone booths have been installed in Tehran. Moreover, from Shahrivar 1359 to Ordibehesht 1360 / Image 23 Aug 80-21 Apr 817 a total of 53,282 telephone numbers have been assigned throughout the country while in the same period 25,700 switching telephones have been installed and 21,945 cable networks laid throughout the country.

Asadabad Telecommunication Base

Lefore the revolution, the expansion and maintenance of the Asadabad international communication base was undertaken by American, Japanese, and Filipino experts and Iranian experts were not allowed to participate in any way in the upkeep of the center. Following the Islamic Revolution, qualified young Iranians devoted round-the-clock total dedicated efforts not only to the proper maintenance of the facility but to correcting defects in gauges and measuring equipment, in improving the quality of the system and in operating lines. During a visit to the center by the speaker of the Islamic Consultative Assembly, all the technical personnel were commended. Repairs to receiving and transmitting equipment, repairs to the international automatic telephone system, increase of operational channels from 8 to 24 and putting the system's computers into operation are among other accomplished activities.

5854

PERTRA-JNA EXPANSION PROJECT--Arman, (PETRA)--PETRA-JNA has started the implementation of a project aimed at boosting and expanding its transmission station. The project will increase the area of transmission of the present station in order to convey the Voice of Jordan to new regions in the world and to enable various other world news agencies to receive the agency's transmission. The new project, which will begin its experimental transmission during the next 2 weeks, will cover Africa and the eastern parts of Asia. Under this project, a new 10 kw-strong transmitter and a rotating logarithmic antenna will be installed. Transmission of the present station covers Europe, North Africa and the Arab homeland by means of two 10 kw-strong transmitters installed at the beginning of 1979. [Text] [JN160911 Arman AR-RA'Y in Arabic 16 Aug 81 p 3]

NEWS AGENCY ANNOUNCES NEW SATELLITE LINK--Kuwait, 18 Aug (KUNA)--The Communications Department of Kuwait News Agency (KUNA) announced today it has developed a new system that will enable the agency's bureaus and subscribers in different countries to receive its news service simultaneously. KUNA satellite lines have been hooked to a distributor to enable all receiving points to receive the transmission at the same time, Communications Chief Hassan al-Khabbaz seid. Al-Khabbaz cited the example of Bahrain, Vienna and London where subscribers to both the Arabic and English services are already receiving KUNA transmissions at the same time. [Text] [GF191221 Kuwait ARAB TIMES in English 19 Aug 81 p 6]

LEBANON

'VOICE OF HOPE' TV STATION TO BEGIN TRIAL BROADCASTS

TA122007 Jerusalem Domestic Television Service in Hebrew 1900 GMT 12 Aug 81

[Text] The television station of the Voice of Hope [name as heard] will shortly start trial broadcasts from southern Lebanon. This was stated this evening by Hotelier Hayim Schiff. He confirmed he is a business partner in the establishment of the station.

Communications Minister Mordekhay Tzipori said today that as long as there is no law to regulate the issue of broadcasts the Communications Ministry does not intervene in the policy of broadcasts and a draft proposal will soon be brought for discussion in the government.

The first shipment of electronic equipment slated for the station has already reached the Haifa Port, our correspondent Rafiq Halabi reports:

[Begin videotape] (?HVN)--This is the name of the television station Sa'd Haddad intends to set up in southern Lebanon. For this he ordered a special broadcasting van from the United States and it has been setting here for nearly 2 weeks on the queue in Haifa Port, under very difficult safety conditions. The van is carrying an identification plate from Illinois in the United States and is dedicated to Maj Sa'd Haddad. A symbol of the red shield of David and a cedar tree decorate the van with the addition of the name Star of Hope. It should be noted that in southern Lebanon a radio station named the Voice of Hope is broadcasting in southern Lebanon. The broadcasting van is locked. A few days ago a truck passing here hit it. The damages are slight indeed but today we noticed a leak of oil from the van. Lately there has been a great deal of talk about an independent television station in southern Lebanon. There were confirmations as well as denials in the meantime. If the station [meaning the equipment in the van] is indeed transferred to southern Lebanon a permit by the IDF authorities and the state of Israel is necessary. [End videotape]

Our military correspondent has learned from the Defense Ministry that it knows of no Israeli partner to the Voice of Hope [name as heard] and that television equipment is handled like any other merchandise transferred to southern Lebanese residents.

CHANA

BRIEFS

BROADCASTING JOB ACTION ENDS--The Ghana Broadcasting Corporation has resumed its normal services which were interrupted yesterday and this morning. The departure from normal program schedules and practices were due to internal difficulties caused by differences between production staff, union executive and management. Persistent efforts have been made to resolve the situation. Those involved in the efforts consisted of the parliamentary committee on information and presidential affairs under its chairman, Dr Appianda-Arthus; the production staff; the union executive; management and chairman of the board of directors of the corporation, Mr Eric Otoo. [Excerpt] [AB121442 Accra Domestic Service in English 1300 GMT 12 Aug 81]

OLD BROADCAST RETURNING -- Radio Liberation-The Voice of the PAIGC, is again being broadcast by our national radio. The weekly program will be broadcast every Wednesday following the news at 1300 hours in Portuguese, and at night, also following the news, in Creole. Broadcasts in national languages are on a daily basis. It should be noted that Radio Liberation, which began broadcasting on 16 July 1967, in support of freedom fighters and of our people, ceased operating on 10 September 1974, with the de jure recognition by the Portuguese government of the Repbulic of Guinea-Bissau. Radio Liberation was reduced to silence after independence by those who, during this dark period in the history of our party, the PAIGC, were gradually killing the party, depriving it of its best weapon, criticism and self-criticism, blind to the fact that they were actually killing themselves. Radio Liberation is finding its voice--the Voice of the PAIGC--at a time when a party instrument is needed to express and propagate partisan opinion, to face the innumerable assaults by opportunists and pseudo-revolutionaries and to inform the people of the ideological debates taking place in the country following the victorious 14 November events. [Excerpts] [Bissau NO PINTCHA in Portuguese 29 Jul 81 p 3]

NIAMEY-LAGOS TELEPHONE COMMUNICATIONS -- The work of the Nigerien-Nigerian joint commission on cooperation began on Monday, 6 July, in the conference rooms of the Postal, Telephone and Telegraph Service and came to a close on Friday, 10 July. Following the meeting, the executive secretary of the joint commission, Gabriel Sam Akunwafor, summarized the business of the session at a press conference. Two recommendations were made by the ministers: one concerning the proposed construction of the council chambers of the Secretariat of the Nigerien-Nigerian joint commission and one concerning PANAFTEL [Pan-African Telecommunications Network]. The cost of the Secretariat headquarters will be some 642 million. "We hope that the work will get underway in August-September. Before the end of 1981, the Secretariat of the commission will be transferred to its new headquarters." PANAFTEL is currently in the call-for-bids stage. "The contract will soon be awarded and we hope that this link will be operational sometime in 1982." This will enable our countries to exchange television programs and to communicate by telephone, telex or telegraph. "Concerning the Secretariat, we wish this PANAFTEL project success because it is the most advanced in Africa at the present time." [Excurpts] [Niamey LE SAHEL in French 13 Jul 81 pp 1, 3] 11,464

INTERNATIONAL COMMUNICATIONS EXHIBITION TO BE HELD IN MOSCOW

Moscow VESTNIK SVYAZI in Russian No 6, Jun 81 p 31

[Article by T. A. Emenova, Chief Engineer, Main Scientific and Technical Administration: "Communications-81"]

[Text] The second international specialized exhibition "Communication Systems and Facilities, 'Communications-81" will be held in Moscow in "Sokol'niki" Park from September 2 to 16, 1981. Here, the Soviet Union and firms of various countries of the world will show their equipment under the slogan "Communication Facilities at the Service of Society and Man". The exhibition is organized by the Ministry of the Communications Equipment Industry, Ministry of Foreign Trade, Ministry of the Radio Industry, Ministry of the Electrical Equipment Industry, Ministry of Communications, USSR Academy of Sciences, and others.

The Soviet exhibit will include more than 3000 items and will occupy about 6000 sq meters of enclosed areas and 2000 sq meters of open areas. The introductory section will familiarize visitors with the participation of the USSR in international commucation systems. It will include models of communications satellites, panels showing international communication systems, as well as specimens of the equipment used in these systems. Another large panel will familiarize visitors with the structural principle of the Unified Automated Network of the Soviet Union (YeASS).

An important place at the exhibition will be occupied by the equipment of satellite communications, television, and radio broadcasting. Equipment will be shown for digital transmission of radio broadcasting programs and photoelectric signals of images of newspaper pages via satellite communication lines "Orbita-RV", and communications facilities of Olympics-80.

In this section, the USSR Ministry of Communications will demonstrate an electronic switching device for video and sound signals KTV, equipment for the synchronization accuracy tolerance control of radio stations AKSR, an automated phototelevision device for recording black-and-white images FTU, a stereotelevision device "Parallaks-1", a portable generator of color strips, and a measuring device for the parameters of television transmitters K2-36.

The "Radio Communication" section will show systems and equipment of the statewide communication service of the YeASS.

The largest section of the Soviet exhibit "Terminal Equipment, Channels and Communication Networks" will show the main technical facilities of the YeASS: digital and analog transmission systems, fiber optics communication systems, telephone, telegraph and facsimile equipment, switching equipment, electric power supply equipment, and computing equipment. In this section, the USSR Ministry of Communications will show the Technical Operation Center of a GTS [municipal telephone exchange] for 300-500 numbers a set of equipment for centralized control of coin-operated telephones at a GTS, a "Fonemofon" speech synthesizer, the "Otel" equipment for settling accounts with hotels for long distance calls, equipment of the accurate hour's service ASV, time-division multiplexing equipment with delta-modulation for subscribers' lines of a GTS D-AVU, equipment for automatic processing and correction of the quality of telegraph messages "Interval", a telegraph multiple-call transmission control panel PTTs-TsKS-100, a telegraph operator's position of a terminal of the Message Switching Center OTsKS-T, color phototelegraphic equipment "Izotop", color digital phototelegraphic equipment TsFTA-Ts, a digital testing set for localizing failure and tuning digital signal processing equipment "Tsiklon", line equipment of the system K-1020S, duplex universal multichannel channel-forming equipment "Dumka", and a display-type telegraph terminal ELIT-T.

The Soviet display will also include antennas for radio relay communication lines, rectifying devices for power supply of large ATS [automatic telephone exchanges] intercity telephone stations, and other communication facilities, an integrated automatic telephone station "Istok" (IATS-KE), as well as measuring instruments. It will also include equipment developed by the enterprises of the USSR Ministry of Communications in conjunction with the Ministry of the Electronic Industry such as equipment sets of superhigh-frequency radio relay communication lines "Elektronika-svyaz'-ITs", "Elektronika-svyaz'-2", as well as a receiving space communication station "Moskva" which was developed jointly with the Ministry of the Communications Equipment Industry.

The "Postal Communications" section will show modern postal equipment, including a machine for automatic processing and stamping of mail, a device for detection of indexes, a machine for automatic sorting of mail by the sizes, a semiautomatic device for sorting printed matter. Visitors of the exhibit will see a model of the rail-road post office in Kiev equipped with the latest equipment. There will be a large exhibit of Soviet postage stamps. A special postage stamp commemorating the exhibition is being issued, and stamps will be cancelled with a special commemorative stamp.

A special display will show the contributions of Soviet scientists into the world communications engineering. Ham radios and Soviet scientific and technical literature will be represented widely. In conclusion, there will be a slide film "Communication Facilities for Sports, Tourism, and Relaxation" which will be shown on several screens.

COPYRIGHT: Izdatel'stvo "Radio i svyaz'", 1981

10,233

PROBLEMS WITH RAILROAD LOUDSPEAKING SYSTEMS DISCUSSED

Moscow GUDOK in Russian 23 Jun 81 p 2

[Article by I. Lopatin, "Gudok" Correspondent, Tashkent]

[Text] The following letter was received at the correspondents' office of "Gudok" in Tashkent: "We, electricians of the Samarkand maintenance section, maintain loudspeaking communication systems at railroad stations. But due to the total absence of spare parts for loudspeakers 10GRD-5, we are in a desperate situation. During the last two years we did not receive a single movable system for these dynamic loudspeakers. Therefore, we have to get by without them and turn them off at some points. We know that this could lead to accidents with people working on the railroad tracks, but we do not see any other way out. According to the management of the material and technical supply services, the railroad gets only one percent of the required amount of spare parts for operating systems. How can a reliable loudspeaking communication service be ensured under these conditions?

Electricians V. Lipunov, A. Khaimov, T. Kasymov".

I showed this letter to the head of the Samarkand section, G. Kontarovich.

Grigoriy Isakovich Kontarovich said: "Everything here is true. We really have a bad situation with spare parts. As a result of this, about 100 loudspeakers are not working in our section. Last year we received only eight movable systems, which is a drop in the ocean."

I talked with the head of the department of STsB [signalization, centralization and block system] and communication of the Bukhara division, A. Latypov.

He complained: "We have a problem with spare radio parts. In order to provide radio communications for the most active sections, we have to remove dynamic loudspeakers from other less active sections. Up to 30 percent of devices are not working even at such stations as Bukhara-1, Samarkand, Tinchlik, Navoi, Bukhara-2, where shunting is done."

I went to the Central Asiatic Railroad Administration and obtained the following figures there: there were 1500 loudspeakers in the requisition for 1980. Only 96 were received. The same number was requisitioned for this year, but funds were approved only for 162 units and even those will be received only in the fourth quarter. The situation with movable systems is about the same.

Loudspeakers 10GRD-5 are intended for 12 hours of operation a day, but they operate practically around the clock. In order to prolong the service life of loudspeakers, communication workers lower the voltage in the network. As a result of this, they work longer, but the quality of transmission is impaired, which is also dangerous.

According to the norms of operational expenditures for radio tubes, semiconductor devices, parts and materials for maintaining radio devices of railroad transportation approved in October of 1966, it is required to have 1.75 systems a year per one point. In accordance with this, the railroad must have 4250 movable systems a year, but it has almost one twentieth of that number.

According to V. Garaburda, head of the radio communication sector, many existing norms have become outdated a long time ago and have to be revised. This applies not only to loudspeakers. It is already the third year that spare parts are not supplied for radio communications on trains and for train switching operations. It is particularly difficult with radio stations of the ZhR-3M-type which have been removed from production but will be used on the railroad for a few more years.

Portable radio sets for personnel engaged in making up trains has a normative service life of eight years, but their actual lifetime is no more than two years. It is not clear why the same service life is established for mobile and stationary radio sets when the conditions of their operation are entirely different!

10,233

CSO: 5500/19

END

END OF DATE FILMED 27 Aug. 1981